9-1-2013

Stress and Alcohol Consumption in College Students: Do Tangible and Belonging Support Matter?

Marion Danh
Winona State University

Amanda Brouwer
Winona State University

Stress and Alcohol Consumption in College Students: Do Tangible and Belonging Support Matter?

Marion Danh

Winona State University

Abstract

College students to cope with stress often use alcohol. Social support has been shown to buffer the negative outcomes of stress, but specific forms of support such as tangible and belonging support have been understudied in the buffering hypothesis. Therefore, I examined how belonging and tangible social support affect alcohol use depending on one's stress level. Participants (N=212, M_{age}= 21.51, SD=2.96) were emailed a survey and responded to demographic, stress, social support, and alcohol consumption questions. The moderation effect was tested using multiple regression. There was a significant interaction between tangible support and perceived stress on hours spent drinking and number of drinks consumed. When tangible support was high, perceived stress had no effect on the hours spent drinking or number of drinks consumed, but for those with low tangible support, hours spent consuming of alcohol and number of drinks consumed increased as stress increased. There was a significant interaction between belonging support and perceived stress on hours spent drinking. The follow-up analysis did not; however indicate a significant change for each group depending on stress level. In all analyses, those with higher support had greater alcohol use. Hypotheses were partially supported, the buffering hypothesis holds for specific forms of social support in college students. Individuals with low social support could be targeted for better stress management practices. Those higher in belonging and tangible support may have spent more hours drinking because they have more friends to socialize with. Implications will be discussed.

Stress and Alcohol Consumption in College Students: Do Tangible and Belonging Support

Family, friends, colleagues, and peers have a great influence on one's daily behaviors. Positive supportive relationships appear to be beneficial to stressed individuals. This research is specifically looking into belonging and tangible social support one has in a relationship. On college campuses, many students are turning to alcohol consumption to cope with stress. The importance in researching tangible and belonging social support is that it may be a mechanism to reduce one's stress, which will then may prevent the maladaptive use of alcohol as a coping mechanism.

Stress can be defined as; "exposures consist of external stimuli that are threatening or harmful, that elicit fear, anxiety, anger, excitement, and/or sadness, and that are negative in impact and outcome" (as cited in Keyes et al., 2011, p. 2). Stress is associated with poor behaviors, which can consequently have negative behavioral outcomes. Pettit and colleagues (2011), conducted a study where 136 undergraduate college students were assessed on perceived stress, energy drink consumption and academic performance. They found a positive relationship between perceived stress and energy drink consumption. Specifically, participants who indicated higher levels of perceived stress reported more days on which at least one energy drink was consumed had higher averages for days per week which energy drinks were ingested, and reported larger numbers of energy drinks consumed. There was a negative correlation between energy drink consumption and academic performance. As energy drink consumption decreased, academic performance increased (Pettit et al., 2011). In addition to the negative effect of stress on academic performance through poor coping behaviors, stressful campus environments have been found to increase risky health behaviors such as cigar use, cigarette smoking, and risky

sexual behaviors (Sterling et al., 2013; Brown et al., 2011; Nagurney et al., 2009). For example, Reed and colleagues (2010) examined how experiencing violence, feeling safe on campus and perceived stress played a role in drug and alcohol use and related consequences among gay, lesbian and bi-sexual (GLB) students and non GLB students. In the sample of 988 college students, GLB-students reported more alcohol and other drug use compared to non-GLB students. GLB students also reported feeling less safe on campus, increased stress, and more experiences of threats and victimization, thereby supporting their hypothesis that stressful campus environments contribute to increased alcohol and other drug use behavior among GLB students (Reed, 2010). Bennett and colleagues (2013), examined the relationship between stress and emotional eating behavior. They found that stress was a barrier to healthy eating behaviors. College students coped with stress by eating unhealthy and high caloric foods (Bennett et al., 2013). In general, research shows that stress can lead to negative behaviors and outcomes. College is typically a time of life that is quite stressful, but important for identity development and career development. Taking on poor coping habits to address stress could be damaging to their future aspirations. This is why a better understanding of stress among college students and ways to promote a healthier and more positive way to cope with it are needed.

Social support and socially supportive relationships have been found to decrease the negative effects of stress, especially among college students. Laurence and colleagues (2009) examined the effects of depressive symptoms, stress and social support among dental students. In a sample of 143 dental students, students with depressive symptoms had higher levels of stress and students with no depressive symptoms had lower levels of stress. Also, students with depressive symptoms had lower levels of social support. Therefore stress and social support were associated with depressive symptoms among dental students (Laurence et al., 2009). Haden and

colleagues (2007) investigated posttraumatic stress disorder (PTSD) symptoms and injury sustained during a traumatic event and the moderating role of perceived social support for college students. In their sample of 150 undergraduate students who reported experiencing different types of trauma, they found that individuals who perceived more severe injury during their trauma reported fewer PTSD symptoms when they perceived high social support from friends indicating that social support impacts PTSD symptomatology (Haden et al., 2007). Researchers have explored social support in general (Hallgren et al., 2013; Pilkonis et al., 2013) but there are various forms of social support that have been studied in relation to coping with stress. For example, Hyman and colleagues (2003) looked at forms of social support that moderated PTSD in childhood sexual abuse survivors. Out of the 172 participants, results showed that self-esteem support, in addition to appraisal support, fostered healthier adjustment and was strongly related to PTSD prevention (Hyman et al., 2003). Seeds and colleagues (2010) studied maltreatment, bullying, adolescent depression and the mediating role of social support. They found that maltreatment and peer bullying were associated with lower levels of perceived tangible and belonging support. Both of these support variables were significant mediators of depression symptom severity (Seeds et al., 2010). In sum, research indicates that various forms of social support can buffer the negative outcomes of stress. Therefore, it would be of value to explore which specific forms of social support could buffer the harmful consequences of stress.

Although social support has been found to buffer the negative effects of stress, college students face a unique social situation when considering the relationships among stress, social support and alcohol use. Students are put in a unique situation because college campuses not only have high levels of stress, but students are away from their home where for many, their social support relationships are. Along with high levels of stress and being away from their

support system, students have increased opportunities to consume alcohol. According to the National Institute on Alcohol Abuse and Alcoholism (n.d.), four out of five college students drink alcohol and about half of college students who drink, binge drink. Approximately 1,825 college students die each year from alcohol-related unintentional injuries and twenty-five percent of college students report academic consequences of their drinking including missing class, falling behind, doing poorly on exams or papers, and receiving lower grades overall. Research presents mixed results when exploring the relationships between college student stressors and alcohol consumption. For example, Park and colleagues (2004) examined daily stress, coping processes and alcohol use among college students. They found that college students who perceived more stress actually drank less than those who perceived less stress. Although, Keiffer and colleagues (2006), in their sample of 365 students, found that college students who were more worried and stressed, particularly with exams, consumed more alcohol for tension reduction. Additionally, Digdon and Landry (2013) found that avoidant coping was a predictor of alcohol consumption, specifically drinking to cope with stressors. Based on the varied findings between stress and alcohol consumption in college students, social support may be an important factor in explaining the connection between stress and alcohol consumption.

Given previous research which supports the buffering effect of social support on stress and the relationship between social support and stress, and alcohol use among college students, I hypothesize that higher stress levels will be associated with more alcohol use. Lower perceived social support will be associated with more alcohol use. I will be specifically exploring tangible support, which is financial assistance, and belonging support, which is giving someone the sense of social belonging. Lower tangible support will be associated with higher alcohol use. I hypothesize this because participants with less financial support will be at a greater stress level

and based on previous research, higher levels of stress have been associated with higher rates of alcohol consumption (Digdon & Landry, 2013; Keiffer et al., 2006). Lower belonging support will be associated with higher alcohol use. I hypothesize this because participants with a lower sense of belonging will feel like they do not fit in and have a higher sense of stress, and based on previous research, stress has been associated with higher alcohol consumption (Digdon & Landry, 2013; Keiffer et al., 2006). There will be a significant interaction between stress and social support, such that the effect of stress on alcohol use will depend on the level of social support. Stress will be related to higher alcohol use among students with lower, relative to high, perceived social support. Given the need to explore specific types of social support I also hypothesize that stressed students with low tangible support will have higher alcohol consumption and stressed students with low belonging support will have higher alcohol consumption.

Method

Participants

Undergraduate college students from a Midwestern university were recruited to participate in this study for a chance to win one of twenty $25 gift card to Amazon.com. Power analyses were calculated using the statistical programming package G-power (Erdfelder, Faul, & Buchner, 1996). Using a medium effect size (f = .25; Cohen, 1988) with alpha at .05 (β = .95), an approximate sample size of 210 will be needed.

There were 212 participants in the study. There were 40 males and 171 females with ages that ranged from 18 to 44 (M=21.51, SD = XX). There were 51 freshman, 40 sophomore, 58 juniors, 59 seniors, and 4 that identified as other. There were 190 White, 3 Hispanic or Latino, 2

Black or African American, 7 Asian or Pacific Islander, and 10 that identified as other.

Procedure

Participants were recruited through flyers, classroom announcements, student group Facebook pages and the snowballing effect. There was a signup board and emails were sent to the participants with the anonymous survey link using Qualtrics. Each participant had a chance to enter their name into a drawing for a chance to win an Amazon gift card. There was a separate form for participants to fill out so that their names were not associated with the survey. Participants were provided with an informed consent that they also completed. Upon consent, students were provided with standardized instructions for all measures. Procedures were in accordance with the university's human subjects committee and the American Psychological Association Code of Ethics.

Materials

Demographic questionnaire. Participants were asked to indicate their age, gender, and year in school and ethnicity.

Stress. Stress was measured using the 14-item Perceived Stress Scale (PSS; Cohen et al., 1983). The scale asked participants to identify how many times they have faced a number of stressors in the previous month on a scale of 0-4, 0 meaning "never" and 4 meaning "very often". Some examples are, "In the last month, how often have you dealt successfully with day to day problems and annoyances?" and "In the last month, how often have you felt confident about your ability to handle your personal problems?" Cohen and colleagues (1983) report that Cronbach's alpha reliability of the PSS was .75. Cronbach's alpha in the current study was.86. Stress was

also measured using the College Student's Stressful Event Checklist (Holmes et al., 1967). The scale asked participants to check off events that have happened to them recently or that they anticipate to occur soon. Some examples are, "Death of a close family member" and "Serious legal problems." The reliability for this checklist has been reported as being high (Holmes et al., 1967). Cronbach's alpha in the current study was .78.

Social support. Social support was measured using the Interpersonal Social Support Evaluation List (ISEL) college version (Cohen et al., 1983). The ISEL consists of a list of 48 statements concerning the perceived availability of potential social resources. It assesses tangible, belonging, self-esteem and appraisal social support. Individuals answer probably true (PT) or probably false (PF). Some examples are, "I know someone who would loan me $50 so I could go away for the weekend," "I hang out in a friend's room or apartment quite a lot," "Lately, when I've been troubled, I keep things to myself," and "Most of my friends are more interesting than I am." Cohen and colleagues (1983) report that Cronbach's alpha reliability is .71 (tangible), .75 (belonging), .60 (self-esteem), and .77 (appraisal). Cronbach's alpha in the current study was .90.

Alcohol consumption. Alcohol use (total drinks per week) was measured using the Daily Drinking Questionnaire (DDQ; Colins et al., 1985). Participants were asked to report the number of drinks they drank on each day of a typical week in the last three months. A total drinks per week score was then be computed by summing the number of drinks reported for each day of the typical week. Collins and colleagues (1989) report that the reliability is .81 for the DDQ. Cronbach's alpha in the current study for number of typical drinks was .65 and number of hours drinking was .83.

Alcohol related consequences were assessed using the Rutgers Alcohol Problem Index (RAPI; White & Labouvie, 1989). Participants will be presented with 23 items and asked to rate on a scale of 0 (none) to 3 (more than five times) consequences resulting from alcohol consumption in the last six months. A few examples of questions used are, "How many times has this happened to you while you were drinking or because of your drinking during the last year? Not able to do your homework or study for a test" or "How many times has this happened to you while you were drinking or because of your drinking during the last year? Went to work or school high or drunk." White and Labouvie (1989) have reported a .92 reliability for the RAPI. Cronbach's alpha in the current study was .91.

Drinking motives were assessed using the Drinking Motives Questionnaire-Revised (DMQ-R; Grant et al., 2007), a modified version of the Drinking Motives Questionnaire (DMQ; Cooper, 1994). Participants will be presented with 28 questions and asked to rate on a scale of 1 (almost never/never) to 5 (almost always/always) their drinking motives. Some examples of questions asked are, "You drink as a way to celebrate" and "You drink because it is what most of my friends do when we get together." Items were broken down into five motives for drinking including depression coping, anxiety coping, social, conformity and enhancement. Grant and colleagues (2007) reported that alpha reliability is .92 (depression coping), .73 (anxiety coping), .85 (social), .85 (conformity), and .80 (enhancement). Cronbach's alpha in the current study was .84.

Data Analysis

Descriptives will be computed for demographic data. The moderation effect was tested using multiple regression. Tangible and belonging support was analyzed in four ways: number of

drinks consumed during a typical week of drinking**,** hours drinking during a typical week of drinking, number of drinks consumed during the heaviest week of drinking, and hours drinking during the heaviest week of drinking**.** Means and standard deviations can be found on Table 1.

Results

Perceived Stress. Perceived stress was not a significant predictor of tangible support and hours spent drinking in a typical week ($t(190) = 1.07$, $p = .28$), hours spent drinking in a heavy week ($t(191) = .89$, $p = .37$), number of drinks in a typical week ($t(190) = 1.17$, $p =. 24$), and number of drinks in a heavy week ($t(191) = .88$, $p = .38$).

Perceived stress was not a significant predictor of belonging support and hours spent drinking in a typical week ($t(190) = .16$, $p = .87$), hours spent drinking in a heavy week ($t(191) = -.41$, $p = .68$), number of drinks in a typical week ($t(190) = .02$, $p = .98$), and number of drinks in a heavy week ($t(191) = -.39$, $p = .70$),

Tangible Social Support. Tangible support was a significant predictor of hours spent drinking in a typical week ($t(190) = 3.27$, $p = .001$), hours spent drinking in a heavy week ($t(189) = 3.22$, $p = .002$.), number of drinks in a typical week ($t(190) = 4.12$, $p < .001$) and number of drinks in a heavy weak ($t(191) = 4.26$, $p<.001$). There was no significant interaction between tangible support and perceived stress for number of drinks in a typical week. However, for hours drinking during a participant's typical week, there was a significant interaction between tangible support and perceived stress, $t(190) = -2.07, p = .04,$ in hours drinking in a typical week. When tangible support was high, perceived stress had no effect on the hours spent drinking, $t(190) = -.36, p = .72$. When tangible support was low, hours spent consuming alcohol increased as stress

increased, *t (190) = 2.23, p = .03.* Figure 1A displays the results for tangible support and hours drinking in a typical week.

For number of drinks during a participant's heaviest week, there was a significant interaction between tangible support and perceived stress, $t(191) = -2.31$, $p = .02$. When tangible support was high, perceived stress had no effect on the number of drinks consumed, $t(191) = -.66$, $p = .51$. When tangible support was low, the number of drinks consumed increased as stress increased, $t(191) = 2.46$, $p = .01$. Figure 2A displays the results for tangible support and number of drinks in the heaviest week.

For hours drinking during a participant's heaviest week, there was a significant interaction between tangible support and perceived stress, $t(189) = -1.95$, $p = .05$. When tangible support was high, perceived stress had no effect on the hours spent drinking, $t(189) = -.56$, $p = .57$. When tangible support was low, hours spent consuming alcohol increased as stress increased, $t(189) = 2.02$, $p = .04$. Figure 2B displays the results for tangible support and hours drinking during the heaviest week.

Belonging Social Support. Belonging support was not a significant predictor of hours spent drinking in a typical week ($t(190) = .90$, $p = .37$), hours spent drinking in a heavy week ($t(189) = .09$, $p = .93$), number of drinks in a typical week ($t(190) = 1.14$, $p = .26$) and number of drinks in a heavy weak ($t(191) = .67$, $p = .50$).

For hours drinking during a participant's typical week there was a significant interaction between belonging support and perceived stress, $t(190) = -1.95$, $p = .05$. However, the follow up analysis did not indicate a significant change for either group depending on stress level, high support: $t(191) = -1.24$, $p = .22$ and low support: $t(191) = 1.59$, $p = .11$. Figure 3A displays the results for belonging support and hours drinking in a typical week.

Discussion

College is typically a stressful time for students and stress has been show to be associated with poor behaviors, which can consequently have negative behavioral outcomes (Sterling et al., 2013; Brown et al., 2011; Nagurney et al., 2009; Pettit et al., 2011). Social support and socially supportive relationships have been found to decrease the negative effects of stress, especially among college students (Laurence et al., 2009; Haden et al., 2007). There have, however, been mixed results in social support buffering the negative effects of stress, particularly alcohol consumption, in college students (Park et al., 2004; Keiffer et al., 2006). Therefore, this study has looked at stress, tangible and belonging social support, and alcohol consumption on college campuses. This study found that for all forms of alcohol use, perceived stress and belonging support did not significantly affect alcohol consumption, but tangible support was a significant predictor of all forms of alcohol use. Findings partially supported my hypothesis. For all forms of alcohol use, perceived stress and belonging support did not significantly affect alcohol consumption but tangible support was a significant predictor of all forms of alcohol use. When tangible support was high, perceived stress had no affect on alcohol consumption, but when tangible support was low, alcohol consumption increased as stress increased.

Perhaps for college students alcohol consumption is not a way to reduce stress. It may be that alcohol consumption is used to socialize during social events rather than used to relieve stress. Alcohol is not affected by the degree to which one feels like they belong. According to the findings in the current study, college students may consume alcohol because they are lonely or because they have lots of friends, as such, no relationship likely exists.

Tangible support did demonstrate the stress buffering effect. There was a significant interaction, when tangible support was high, stress had no effect on alcohol consumption and

when tangible support was low, increased stress le to more alcohol consumption. An interesting finding is that high levels of tangible support were associated with higher levels of alcohol consumption. When looked at more closely, tangible support, by definition, is a form of support, which may be the type of support most needed by those who have been drinking. Examples include, having someone to give you a ride home, having someone you could borrow money from, and having someone who would take care of you when you're sick. All of these examples are behaviors closely related to those who have been drinking.

Findings may be particularly important for those with low tangible support. Practitioners or counselors could assist in identifying sources of tangible support or alternative coping mechanisms for stress.

There were a few limitations to this study. The sample in this study was mainly students from a single university in the midwest. There were a few participants from surrounding colleges, but not many. The study was also completely self-report. Participants may not have answered honestly or may have misunderstood questions in the survey. The survey was also completely voluntary, so the motives of the participants are unknown. Future research should investigate tangible and belonging support in more depth and try to understand why tangible support has a buffering effect, but belonging support does not. It would also be interesting to look at gender and college class differences. Future researchers could also investigate where students are drinking, whether it is at a bar, house party, or alone and if this has any affect related to social support. Larger and more diverse populations should also be used.

References

Bennett, J., Greene, G., & Schwartz-Barcott, D. (2013). Perceptions of emotional eating behavior. A qualitative study of college students. *Appetite*, *60*, 87-192.

Cohen, S., & Hoberman, H. (1983). Positive events and social supports as buffers of life change stress. *Journal of Applied Social Psychology*, *13*, 99-125.

Cohen, S., Kamarck, T., & Mermelstein, R. (1983). A global measure of perceived stress. *Journal of Health and Social Behavior*, *24*, 385-396.

Collins, L., George, W., & Lapp, W. (1989). Drinking restraint: Refinement of a construct and prediction of alcohol consumption. *Cognitive Therapy and Research*, *13*, 423-440.

Danh, M. (2014, April). *Stress and alcohol consumption in college students: Do tangible and belonging support matter?* Poster presented at Minnesota Undergraduate Scholars Conference, Moorehead, MN.

Digdon, N., & Landry, K. (2013). University students' motives for drinking alcohol are related to evening preference, poor sleep, and ways of coping with stress. *Biological Rhythm Research*, *44*, 1-11.

Grant, V. V., Stewart, S. H., O'Connor, R. M., Blackwell, E., & Conrod, P. J. (2007). Psychometric evaluation of the five-factor modified drinking motives questionnaire — Revised in undergraduates. *Addictive Behaviors*, *32*, 2611-2632.

Haden, S. C., Scarpa, A., Jones, R. T., & Ollendick, T. H. (2007). Posttraumatic stress disorder symptoms and injury: the moderating role of perceived social support and coping for young adults. *Personality & Individual Differences*, *42*, 1187-1198.

Hallgren, K. A., Ladd, B. O., & Greenfield, B. L. (2013, April 15). Psychometric properties of the important people instrument with college student drinkers. *Psychology of Addictive Behaviors.* Advance online publication.

Holmes, T., & Rahe, R. (1967). The social readjustment rating scale. *Journal of Psychosomatic Research*, *11*, 213-218.

Hyman, S. M., Gold, S. N., & Cott, M. A. (2003). Forms of social support that moderate PTSD in childhood sexual abuse survivors. *Journal of Family Violence*, *18*, 295-300.

Keyes, K., Hatzenbuehler, M., & Hasin, D. (2011). Stressful life experiences, alcohol consumption, and alcohol use disorders: The epidemiologic evidence for four main types of stressors. *Psychopharmacology*, *218*, 1-17.

Kieffer, K. M., Cronin, C., & Gawet, D. L. (2006). Test and study worry and emotionality in the prediction of college students' reasons for drinking: An exploratory investigation. *Journal of Alcohol & Drug Education*, *50*, 57-81.

Laurence, B., Williams, C., & Eiland, D. (2009). Depressive symptoms, stress, and social support among dental students at a historically black college and university. *Journal Of American College Health*, *58*, 56-63.

National Institute on Alcohol Abuse and Alcoholism, (n.d.). *College drinking*. Retrieved from website: http://www.niaaa.nih.gov/alcohol-health/special-populations-co-occurring-disorders/college-drinking

Park, C. L., Armeli, S., & Tennen, H. (2004). The daily stress and coping process and alcohol use among college students. *Journal of Studies On Alcohol*, *65*, 126-135.

Pettit, M. L., & DeBarr, K. A. (2011). Perceived stress, energy drink consumption, and academic performance among college students. *Journal of American College Health*, *59*, 335-341.

Pilkonis, P. A., Choi, S. W., Salsman, J. M., Butt, Z., Moore, T. L., Lawrence, S. M., & Cella, D. (2013). Assessment of self-reported negative affect in the NIH toolbox. *Psychiatry Research*, *206*, 88-97.

Reed, E., Prado, G., Matsumoto, A., & Amaro, H. (2010). Alcohol and drug use and related consequences among gay, lesbian and bisexual college students: Role of experiencing violence, feeling safe on campus, and perceived stress. *Addictive Behaviors*, *35*, 168-171.

Seeds, P. M., Harkness, K. L., & Quilty, L. C. (2010). Parental maltreatment, bullying, and adolescent depression: Evidence for the mediating role of perceived social support. *Journal of Clinical Child & Adolescent Psychology*, *39*, 681-692.

Sterling, K., Berg, C. J., Thomas, A. N., Glantz, S. A., & Ahluwalia, J. S. (2013). Factors associated with small cigar use among college students. *American Journal of Health Behavior*, *37*, 325-333.

White, H.R. & Labouvie, E.W. (1989). Toward the assessment of adolescent problem drinking. *Journal of Studies on Alcohol 50*,30-37.

Table 1.

	Number of drinks during typical week	Hours drinking during a typical week	Number of drinks during heaviest week	Hours drinking during heaviest week
Mean	5.21	5.39	8.20	6.42
Standard Deviation	6.57	6.40	9.86	7.57

Figure 1A.

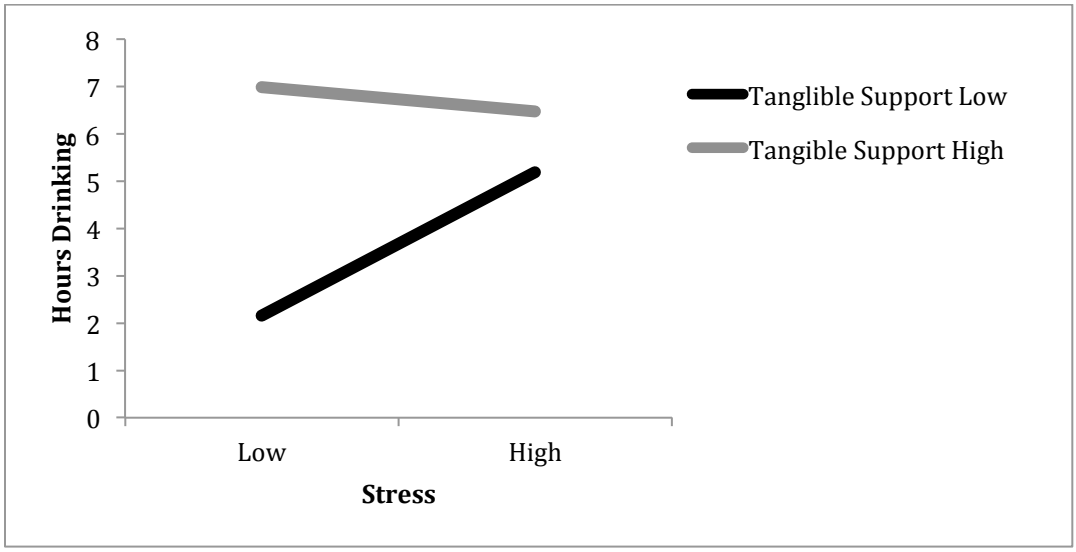


Figure 1. displays the results for tangible support and hours drinking in a typical week.

Figure 2A.

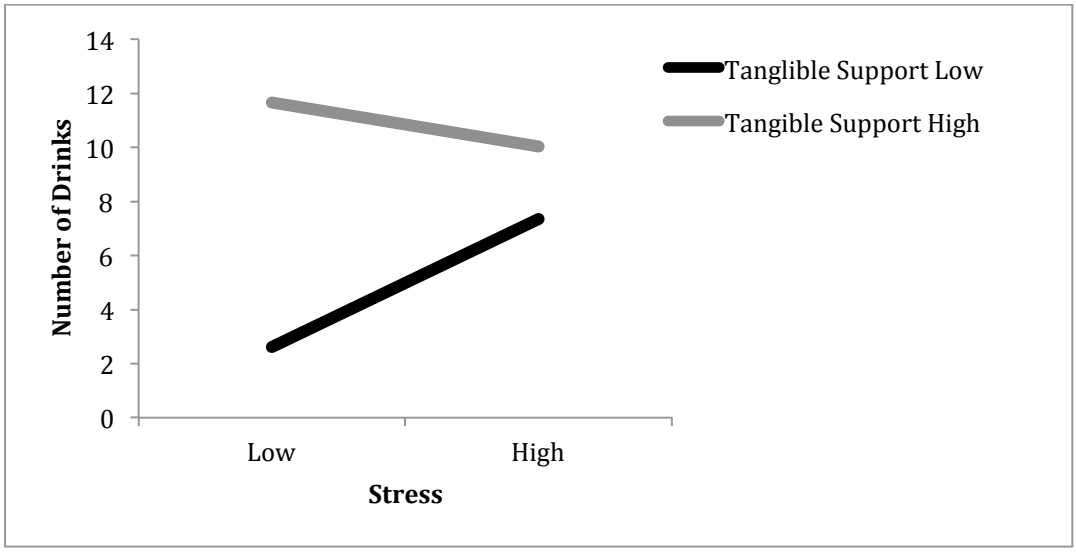


Figure 2B.

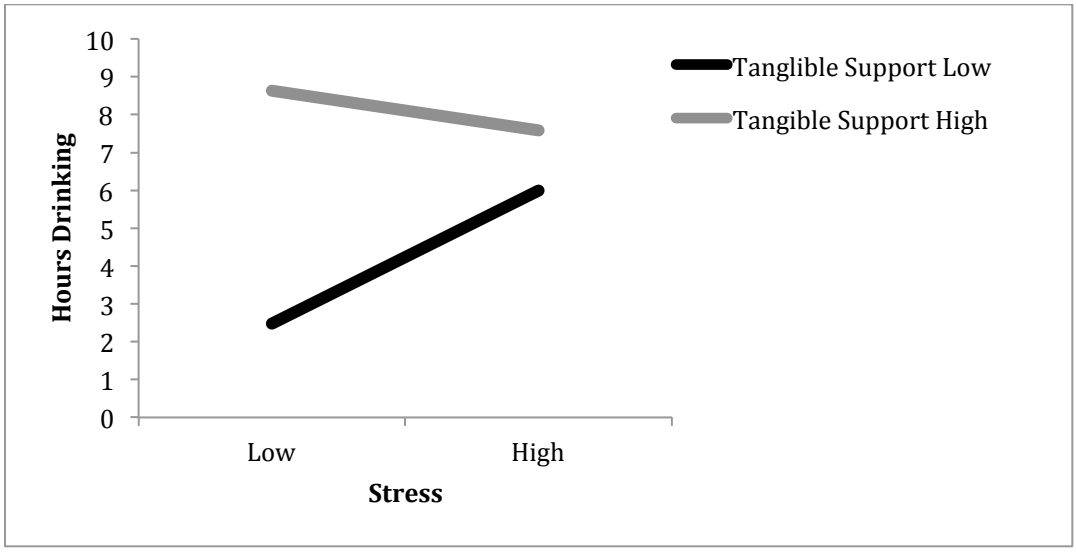
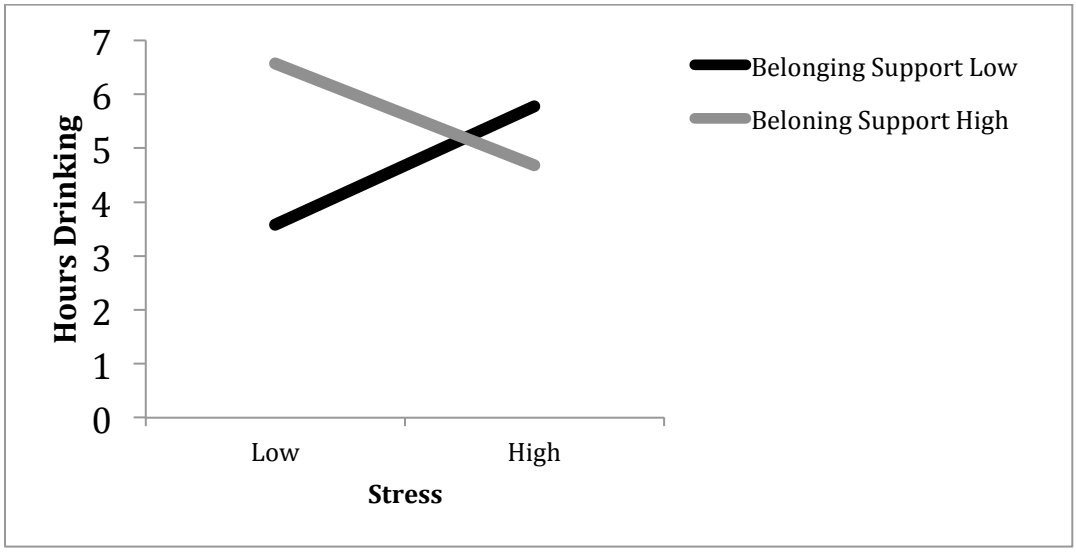


Figure 2. displays the results for tangible support and (A) number of drinks in the heaviest week and the results for tangible support and (B) hours drinking in the heaviest week.

Figure 3A.



.

Figure 3. displays the results for belonging support and hours drinking in a typical week.

Stress and Alcohol Consumption in College Students: Do Tangible and Belonging Support Matter?

Marion Danh (Amanda M. Brouwer, Ph.D.)
Winona State University

INTRODUCTION

Stress

- Stress is "exposures consist of external stimuli that are threatening or harmful, that elicit fear, anxiety, anger, excitement, and/or sadness, and that are negative in impact and outcome" (as cited in Keyes et al., 2011, p. 2)
- Stress is associated with poor health behaviors (Pettit et al., 2011)
- Stressful campus environments increase risky health behaviors such as cigar use, cigarette smoking, alcohol consumption and risky sexual behavior (Sterling et al., 2013; Brown et al., 2011; Nagurney et al., 2009)

Social Support

- Social support and socially supportive relationships have been found to decrease the negative effects of stress, especially among college students (Laurence et al., 2009)
- Research indicates that various forms of social support can buffer the negative outcomes of stress (Seeds el al., 2010; Hyman et al., 2003), therefore it would be of value to explore which specific forms buffer harmful consequences
- The effect of tangible support (e.g., financial assistance) and belonging support (e.g., giving someone the sense of fitting in), were specifically analyzed

Alcohol Consumption

- Approximately 1,825 college students die each year from alcohol related unintentional injuries, and 25% of college students report academic consequences of their drinking (National Institute on Alcohol Abuse and Alcoholism)
- Research presents mixed results when exploring the relationships between college student stressors and alcohol consumption (Parks et al,, 2004; Keiffer et al., 2006; Digdon and Landry, 2003).

Hypotheses

- Lower tangible and belonging support will be associated with higher alcohol use
- Higher perceived stress will be associated with higher alcohol use
- There will be a significant interaction between stress and social support, such that the effect of stress on alcohol use will depend on the level of social support

METHOD

Participants

- N=212, Men = 40; Women = 71; Other = 1
- M_{age}=21.51, SD=2.96
- Education Level
  - Freshman: 24.1%, Sophomore: 18.9%, Junior: 27.4%, Senior: 29.7%
- Race:
  - White: 89.6%, Hispanic: 1.4%, Black: .9%, Asian/Pacific Islander: 3.3%, Other: 4.7%

Procedure

- Participants completed an anonymous survey link using Qualitrics. Participants were entered into a drawing to win an Amazon gift card.

Measures

- Demographic Questionnaire
- Perceived Stress Scale (PSS; Cohen et al., 1983)
- College Student's Stressful Event Checklist (Holmes, et al., 1967)
- Interpersonal Social Support Evaluation List College Version (Cohen et al., 1983)
- Daily Drinking Questionnaire (Colins et al., 1985)
- Rutgers Alcohol Problem Index (White and Labouvie, 1989)

Statistical Analyses

- The moderation effect was tested using multiple regression

DISCUSSION

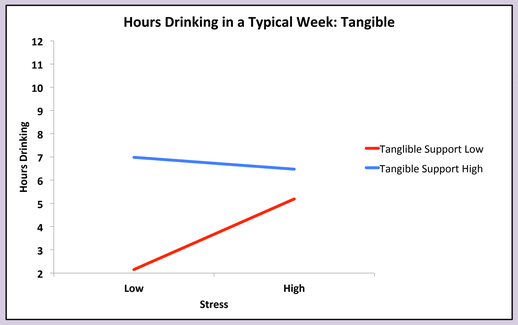
- Hypotheses was partially supported. Stress and belonging support did not significantly affect alcohol consumption.
  - Perhaps for college students alcohol consumption is not a way to reduce stress. It may be that alcohol consumption is focused on social events or social relationships rather than stress relief .
  - Alcohol consumption is not affected by the degree to which one feels like they belong. College students may consume alcohol for reasons that they are lonely and for reasons that they have lots of friends, as such, no relationship likely exists.
- High levels of tangible support were associated with higher levels of alcohol consumption.
- There was a significant interaction; tangible support demonstrated the stress buffering effect
  - When tangible support was high, stress had no effect on alcohol consumption
  - When tangible support was low, increased stress led to more alcohol consumption
- Tangible support, by definition, is a form of support which may be the type of support most needed by those who have been drinking.
- Findings might be particularly important for those with low tangible support; practitioners or counselors could assist in identifying sources of tangible support or alternative coping mechanisms for stress.

RESULTS

For all forms of alcohol use, perceived stress and belonging support did not predict alcohol use. Tangible support was a significant predictor of all forms of alcohol use.

	Typical Hours	Typical Drinks	Heaviest Hours	Heaviest Drinks	Tangible	Belonging	Perceived Stress
Mean	5.39	5.21	6.42	8.20	9.35	7.42	38.27
SD	6.40	6.57	7.57	9.86	2.62	3.02	7.94
Range	0-45	0-31	0-41	0-51	0-12	1-12	21-62

Hours Drinking in a Typical Week

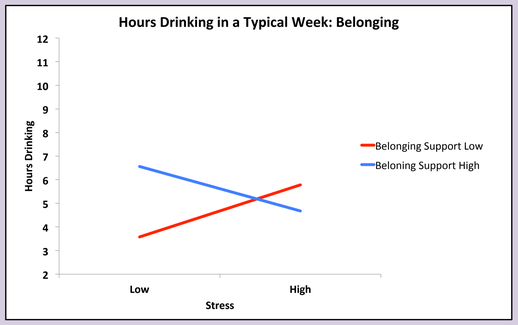


There was a significant interaction between tangible support and perceived stress, *t(190) = -2.07, p = .04*

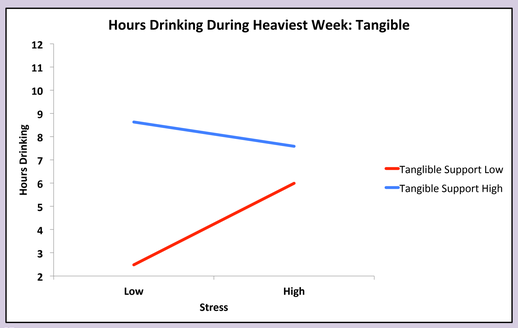
- When tangible support was high, perceived stress had no effect on the hours spent drinking, *t(190) = -.36, p = .72*
- When tangible support was low, hours spent consuming alcohol increased as stress increased, *t (190) = 2.23, p = .03*

There was a significant interaction between belonging support and perceived stress, *t(190) = -1.95, p = .05*

- The follow up analysis did not indicate a significant change for either group depending on stress level
  - High support: *t(191) = -1.24, p = .22*
  - Low support: *t(191) = 1.59, p = .11*



Hours Drinking During Heaviest Week



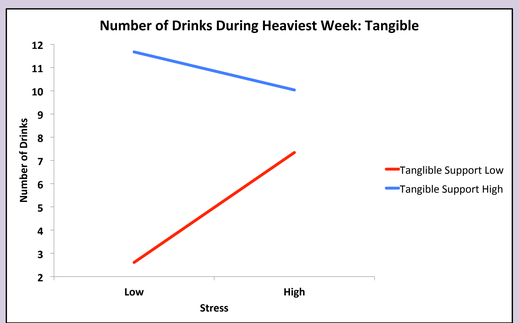
There was a significant interaction between tangible support and perceived stress, *t(189) = -1.95, p = .05*

- When tangible support was high, perceived stress had no effect on the hours spent drinking, *t(189) = -.56, p = .57*
- When tangible support was low, hours spent consuming alcohol increased as stress increased, *t(189) = 2.02, p = .04*

Number of Drinks During Heaviest Week

There was a significant interaction between tangible support and perceived stress, *t(191) = -2.31, p = .02*

- When tangible support was high, perceived stress had no effect on the number of drinks consumed, *t(191)= -.66, p=.51*
- When tangible support was low, the number of drinks consumed increased as stress increased, *t(191)= 2.46, p= .01*



Funding for this project was provided by Winona State University Research and Creative Project Grant

Appendix C

RESEARCH / CREATIVE PROJECT ABSTRACT / EXECUTIVE SUMMARY FINAL REPORT FORM

Title of Project:
The College Health Study

- -

Student Name: Marion Danh
Faculty Sponsor: Dr. Amanda Brouwer
Department: Psychology

- -

Abstract:
College students to cope with stress often use alcohol. Social support has been shown to buffer the negative outcomes of stress, but specific forms of support such as tangible and belonging support have been understudied in the buffering hypothesis. Therefore, I examined how belonging and tangible social support affect alcohol use depending on one's stress level. Participants (N=212, Mage= 21.51, SD=2.96) were emailed a survey and responded to demographic, stress, social support, and alcohol consumption questions. The moderation effect was tested using multiple regression. There was a significant interaction between tangible support and perceived stress on hours spent drinking and number of drinks consumed. When tangible support was high, perceived stress had no effect on the hours spent drinking or number of drinks consumed, but for those with low tangible support, hours spent consuming of alcohol and number of drinks consumed increased as stress increased. There was a significant interaction between belonging support and perceived stress on hours spent drinking. The follow-up analysis did not; however indicate a significant change for each group depending on stress level. In all analyses, those with higher support had greater alcohol use. Hypotheses were partially supported, the buffering hypothesis holds for specific forms of social support in college students. Individuals with low social support could be targeted for better stress management practices. Those higher in belonging and tangible support may have spent more hours drinking because they have more friends to socialize with. Implications will be discussed.

- -

The end product of this project in electronic format has been submitted to the Provost/Vice President for Academic Affairs via the Office of Grants and Sponsored Projects Officer (Maxwell 161, npeterson@winona.edu)

Student Signature: Marion Danh Date: 05/06/14

Faculty Sponsor Signature: Amanda M. Brouwer Date: 5/6/14